

# **APPENDIX C**

## *Proposed AT Project List*

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
1-1a	Petawawa Boulevard	Doran Road / Mohns Avenue	Civic Centre Road / Murphy Road	County - Major Arterial	1421	50	12,402	- Single vehicle lanes in either direction, with auxiliary turn lanes - Bike lanes (≈1.5 metres wide) - Bike lane adjacent to curb at intersection approaches (i.e. northbound at Dundonald Drive and southbound at Murphy Road) instead of conventional configuration between the through lane and dedicated right-turn lane - Concrete sidewalk with grass boulevard and curb on east side of road	Buffered Bike Lane	Narrow existing vehicle lanes to accommodate wider, buffered bike lanes. The bike lanes should be delineated between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south route through Petawawa. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.
1-1b	Petawawa Boulevard	Civic Centre Road / Murphy Road	Limestone Trail / Town Centre Boulevard	County - Major Arterial	799	60	15,514	- Single vehicle lanes in either direction, with auxiliary turn lanes - Bike lanes (≈1.5 metres wide) - Bike lane adjacent to curb at intersection approaches instead of conventional configuration between the through lane and dedicated right-turn lane - Concrete sidewalk with grass boulevard and curb on east side of road; no grass boulevard adjacent to northbound right-turn lanes	Buffered Bike Lane	Narrow existing vehicle lanes to accommodate wider, buffered bike lanes. The bike lanes should be delineated between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south route through Petawawa. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.
1-1c	Petawawa Boulevard	Limestone Trail / Town Centre Boulevard	B Line Road / Golf Course Road	County - Major Arterial	5490	80	13,044	- Single vehicle lanes in either direction, with auxiliary turn lanes - Paved shoulders with bike lane symbols applied infrequently (every 250-750 metres) - Bicycle facility adjacent to edge of roadway at intersection approaches instead of conventional configuration between the through lane and dedicated right-turn lane - Asphalt sidewalk with grass boulevard on east side of the road between Limestone Trail and Laurentian Drive, and between Schwantz Road (south) and River Drive	Buffered Paved Shoulder	Narrow existing vehicle lanes to accommodate wider, buffered paved shoulders. Bike lanes should be added between the through lane and any dedicated right-turn lane (i.e. left of any dedicated right-turn lane) - see TAC (2017) Section 5.6.1.2. This improves an important north-south connection through Petawawa and to / from Pembroke and the Township of Laurentian Valley. Cyclists that desire full separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.
1-2a	Albert Street	Island View Drive	Victoria Street	Municipal	844	40	1,535	- Road width approximately 7.5 metres (source: Google Earth) - Asphalt sidewalk on west side of road, with asphalt drainage channel between the sidewalk and the road	In-Boulevard Multi-Use Pathway	Widening the asphalt sidewalk on the west side of the road to a 3.0 metre wide MUP provides a comfortable connection to / from Petawawa Point.
1-3a	Laurentian Drive	Victoria Street	Civic Centre Road	County - Collector	1012	50	3,238	- Laurentian Drive between Victoria Street and Dundonald Drive includes an asphalt sidewalk with curb on the west side of the road, and a paved asphalt shoulder on the east side of the road - Steep grade (measured at 7.6%) between Victoria Street and Dundonald Drive - Laurentian Drive between Dundonald Drive and Civic Centre Road has similar characteristics to Dundonald Drive south of Civic Centre Road (see Project ID 8)	In-Boulevard Multi-Use Pathway	Widening the asphalt sidewalk on the west side of the road to 3.0 metre wide bidirectional MUP provides a comfortable north-south route and a connection to Valour JK-12 School and Saint Francis of Assisi School.
1-3b	Laurentian Drive	Civic Centre Road	Petawawa Boulevard	County - Collector	2485	50	2,280	- 1.5 metre wide asphalt sidewalk on the west side of the road - 1.5-2.0 metre gravel shoulders, and a 1.0 metre plus grass boulevard between the sidewalk and the west shoulder	In-Boulevard Multi-Use Pathway	Widening the asphalt sidewalk on the west side of the road to 3.0 metre wide bidirectional MUP provides a comfortable north-south route and a connection to Valour JK-12 School and Saint Francis of Assisi School.  Following implementation of the proposed MUP, the Town should evaluate the need to provide a controlled pedestrian crossing (signal or pedestrian crossover) from the west side of Laurentian Drive to the Petawawa Terrace parking lot and trailhead approximately 80 m north of Sunset Crescent / Ravenwood Crescent. Evaluation should follow the guidance of Section 5.1 of Ontario Traffic Manual Book 15 - Pedestrian Crossing Treatments, and should include conducting an 8-hour count of pedestrian and vehicle volumes at the potential crossing location.
1-4a	Scott Avenue	Portage Road	Hilda Street	Municipal - Local	196	50	319	- Road width approximately 6.5 metres (source: Google Earth) - No sidewalk or curb	Signed Bicycle Route	Signed route provides a connection between Portage Road and the proposed off-road cycling network south of Nature's Acre Park (south of the intersection of Scott Avenue and Hilda Street).

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
1-5a	Hilda Street	Scott Avenue	Doran Road	Municipal - Local	548	50	600	- Road width approximately 6.5 metres (source: Google Earth) - No sidewalk or curb - Approximately 40 metres of sidewalk on the north side of the road west of Doran Street	Signed Bicycle Route	Signed route provides a connection between the Algonquin Trail / Petawawa Boulevard and the proposed off-road cycling network south of Nature's Acre Park (south of the intersection of Scott Avenue and Hilda Street). The route also provides a connection to Mohns Avenue and Our Lady of Sorrows Elementary School.
1-6a	Mohns Avenue	Petawawa Boulevard	Wolfe Avenue	Municipal - Collector	837	50	4,515	- Mountable curb and channel with asphalt boulevards approximately 1.5 metres wide - Concrete sidewalk on the south side of the road	Separated Bike Lane or Cycle Track	Mohns Avenue is an important east-west collector that also serves Our Lady of Sorrows Elementary School. Re-designate the existing asphalt boulevards with bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. Improve the side street crossings by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability.
1-7a	John Street	Algonquin Trail	Murphy Road	Municipal - Local	838	50	584	- Road width approximately 6.5 metres (source: Google Earth) - Asphalt sidewalk with asphalt drainage channel on the east side of the road (Herman Street to Roy Street). Asphalt drainage channel delineated from road surface and asphalt sidewalk by painted lines	Signed Bicycle Route	Signed bicycle route on John Street provides a north-south neighbourhood cycling route that, along with Roy Street, connects the proposed in-boulevard multi-use trail on Murphy Road to the Algonquin Trail. Additional work is required to provide a multi-use trail connection from the north end of John Street to the Algonquin Trail. Recommend stop signs for users crossing the motorized portion of the Algonquin Trail, as well as caution signs warning motorized users of the crossing at John Street.
1-8a	Off-Road Connection	Civic Centre Parking	Leeder Lane	N/A	388	N/A	N/A	- Existing parking lot and gravel driveway between Volunteer Way and pathway north of Saint Francis of Assisi School	Off-Road Trail	Provide a formal off-road connection south of Civic Centre parking lot and gravel road leading to the "Back 40" parking lot to connect to the existing pathway north of St Francis of Assisi School.
1-9a	Nuthatch Drive	Murphy Road	Cardinal Crescent	Municipal - Local	563	50	1,000	- Road width approximately 6.5 metres (source: Google Earth) - Concrete sidewalk and large grass boulevard / ditch on the west side of the road (Murphy Road to approximately 50 metres north of Cardinal Crescent)	Signed Bicycle Route	Nuthatch Drive, together with Cardinal Crescent and Carla Street, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road. Also connects to the Roy Street-John Street neighbourhood cycling route north of Murphy Road.
1-9b	Cardinal Crescent	Nuthatch Drive	Carla Street	Municipal - Local	392	50	1,000	- Road width approximately 6.5 metres (source: Google Earth) - Narrow gravel shoulders	Signed Bicycle Route	Cardinal Crescent, together with Nuthatch Drive and Carla Street, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road.
1-9c	Carla Street	Cardinal Crescent	Black Bay Road	Municipal - Local	1156	50	1,000	- Gravel shoulders - Road asphalt in poor condition - Grade north of Jason Street is approximately 4%	Signed Bicycle Route	Carla Street, together with Nuthatch Drive and Cardinal Crescent, provides a north-south neighbourhood cycling route between Black Bay Road and Murphy Road. Also connects, via the municipal park 100m south of Derek Drive, to the proposed off-road trail along the power line corridor east of Carla Street and west of Industrial Avenue.
1-10a	Butler Boulevard	Murphy Road	Nick Street / Town Centre Boulevard	Municipal - Local	148	50	6,284	- Road width approximately 10.0 metres (source: Google Earth) - Concrete curb / channel on both sides of the road - Concrete sidewalk and grass boulevard on the east side of the road	Bike Lane	Bike lanes are proposed on the northernmost block of Butler Boulevard as an extension of the bike lanes proposed on Town Centre Boulevard. Reallocate the approximate 10 metre road width to 2 x 3.5 metre vehicle lanes and 2 x 1.5 metre bike lanes. Apply bicycle lane pavement markings and signage - Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes.

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
1-10b	Butler Boulevard	Nick Street / Town Centre Boulevard	Bedard Boulevard	Municipal - Local	615	50	3,000	- Road width approximately 7.0 metres (source: Google Earth) - Concrete sidewalk and large grass boulevard / ditch on the east side of the road	Signed Bicycle Route	Together with Bedard Boulevard and Whippoorwill Drive, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.
1-10c	Bedard Boulevard	Butler Boulevard	Whippoorwill Drive	Municipal - Local	178	50	1,000	- Road width approximately 6.5 metres (source: Google Earth) - Concrete curb / channel on both sides of the road - Concrete sidewalk on the east side of the road	Signed Bicycle Route	Together with Butler Boulevard and Whippoorwill Drive, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.
1-10d	Whippoorwill Drive	Cardinal Crescent	Bedard Boulevard	Municipal - Local	164	50	1,000	- Road width approximately 7.0 metres (source: Google Earth) - Concrete sidewalk and large grass boulevard on the south side of the road (between 50 metres west of Bedard Boulevard and Bedard Boulevard)	Signed Bicycle Route	Together with Butler Boulevard and Bedard Boulevard, provides a neighbourhood cycling route between Cardinal Crescent and Murphy Road / Town Centre Boulevard.
1-11a	Town Centre Boulevard	Butler Boulevard	Petawawa Boulevard	Municipal - Local	878	50	5,472	- Road width approximately 10.0 metres (source: Google Earth) - Concrete curb / channel on both sides of the road - Concrete sidewalk and grass boulevard both sides of the road	Bike Lane	Bike lanes on Town Centre Boulevard to connect Limestone Trail and Butler Boulevard and allow cyclists to access future retail on Town Centre Boulevard. The bike lanes may be constructed by reallocating the approximate 10 metre road width to 2 x 3.5 metre vehicle lanes and 2 x 1.5 metre bike lanes. Apply bicycle lane pavement markings and signage - Ontario Traffic Manual - Book 18, Section 4.3. Ensure bicycle lanes are sufficiently signed and marked through high volume commercial accesses. Sign and enforce no parking on the new bike lanes.
1-12a	Selley Street	Laurentian Drive	Gutzman Road	Municipal - Local	639	50	176	- Road width approximately 6.0 metres (source: Google Earth) - Narrow gravel shoulders	Signed Bicycle Route	Selley Street, together with Country Lane, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.
1-12b	Country Lane	Gutzman Road	Sandy Drive	Municipal - Local	829	50	352	- Road width approximately 6.0 metres (source: Google Earth) - Narrow gravel shoulders - Long straight local road may encourage high operating speeds	Signed Bicycle Route	Country Lane, together with Selley Street, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.
1-12c	Sandy Drive	Country Lane	Isabel Street	Municipal - Local	276	50	500	- Road width approximately 6.0 metres (source: Google Earth)	Signed Bicycle Route	Sandy Drive, together with Selley Street, Sandy Drive, Isabel Street, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.
1-12d	Isabel Street	Sandy Drive	Sack Road	Municipal - Local	200	50	500	- Road width approximately 6.0 metres (source: Google Earth)	Signed Bicycle Route	Isabel Street, together with Selley Street, Country Lane, Sandy Drive, and Kramer Avenue, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard.
1-12e	Sack Road	Isabel Street	Kramer Avenue	Municipal - Local	30	50	500	- Road width approximately 7.0 metres (source: Google Earth)	Signed Bicycle Route	Sack Road provides a short connection between Isabel Street and Kramer Avenue, as part of the north-south neighbourhood cycling route between Laurentian Drive and Pine View School.
1-12f	Kramer Avenue	Sack Road	100m south of White Street	Municipal - Local	284	50	500	- Road width approximately 6.0 metres (source: Google Earth)	Signed Bicycle Route	Kramer Avenue, together with Selley Street, Country Lane, Sandy Drive, and Isabel Street, provides a north-south neighbourhood cycling route between Laurentian Drive and Pine View Public School. This alternative cycling route is a low-stress alternative to Laurentian Drive, Schwanz Road or Petawawa Boulevard. Ensure the entrance to the off-road cycling connection from the south end of the proposed Kramer Avenue cycling route to Pine View Public School is well signed and easily visible.

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
1-13a	Black Bay Road	Doran Road	Petawawa Boulevard	Municipal - Collector	1806	60	2,000	- Gravel shoulders	Paved Shoulder	Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.
1-14a	Schwanz Road	Laurentian Drive	Petawawa Boulevard	Municipal - Local	1080	50	500	-Asphalt sidewalk that is approximately 1.5 metres wide on the west side of the road, with a grass boulevard of varying width	In-Boulevard Multi-Use Pathway	Widening the existing sidewalk to create a multi-use pathway on the west side of Schwanz Road provides a continuation of the multi-use pathway proposed on Laurentian Drive. Design constraints of existing platform width, drainage, and location of hydro poles.
1-15a	Achray Road	Doran Road	B Line Road	Municipal - Collector	4402	60	1,500	- Road width approximately 6.5 metres (source: Google Earth) - Narrow gravel shoulders - Pavement looks to be in poor condition (source: 2012 Google Street View)	Paved Shoulder	Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.
1-15b	B Line Road	Achray Road	Petawawa Boulevard	Municipal - Collector	66	80	2,028	- Gravel shoulders - Concrete curb for approximately 20 metres west of Petawawa Boulevard	Paved Shoulder	Provides a short, but important, connection between Achray Road and Petawawa Boulevard / Golf Course Road
1-16a	Off-Road Connection	Pine View Public School / Petawawa Boulevard	Runge Drive	N/A	123	N/A	N/A	- There is an existing informal pedestrian trail / connection from Runge Drive to Pineview School through the forest south of Pine View School, no connection from Petawawa Boulevard	Off-Road Trail	Provides a connection between Pine View Public School and Runge Drive so students can access Pine View Public from the south without using Petawawa Boulevard. Assumed that proposed pathway is asphalt.
1-17a	Off-Road Connection	Valour JK-12 School	Laurentian Drive	N/A	84	N/A	N/A	- Town of Petawawa owned park parcel between 551 Laurentian Drive and 529 Laurentian Drive	Off-Road Trail	Provides a connection between Valour JK-12 School and Laurentian Drive.
1-18a	Off-Road Connection	Charles Street	Boulder Creek Trail	N/A	59	N/A	N/A	- Existing desire line and informal path between Charles Street and Boulder Creek Trail	Off-Road Trail	Improving the informal path between Charles Street and Boulder Creek Trail allows for north-south movement between these street's respective communities without using either Petawawa Boulevard or Laurentian Drive.
1-19a	Algonquin Trail	Paquette Road	Petawawa River	N/A	871	N/A	N/A	- Abandoned rail corridor paralleled by an asphalt pathway approximately 40 metres to the east	Off-Road Trail	The Algonquin Trail between Paquette Road and Portage Road is an important alternative to cycling on Petawawa Boulevard when crossing the Petawawa River between Garrison Petawawa and the Town of Petawawa. Propose widening the existing asphalt pathway. Consider a pedestrian / cyclist crossing of Paquette Road to connect to the Garrison Fitness Trail.
1-19b	Algonquin Trail	Petawawa River	Portage Road	N/A	404	N/A	N/A	- Abandoned rail corridor paralleled by a dirt path approximately 10 metres to the east	Off-Road Trail	The Algonquin Trail between Paquette Road and Portage Road is an important alternative to cycling on Petawawa Boulevard when crossing the Petawawa River between Garrison Petawawa and the Town of Petawawa. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one trail for non-motorized users.

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
1-20a	Algonquin Trail	Portage Road	Doran Road	N/A	284	N/A	N/A	- Abandoned rail corridor	Off-Road Trail	The Algonquin Trail in the Town of Petawawa forms a north-south spine route that many other proposed cycling routes will connect to. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.
1-20b	Algonquin Trail	Doran Road	Murphy Road	N/A	1398	N/A	N/A	- Abandoned rail corridor adjacent to Petawawa Boulevard - Informal pathway running along the southwest side of the rail corridor	Off-Road Trail	The Algonquin Trail in the town of Petawawa forms a north-south spine route with cycling route connections. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.
1-21a	Algonquin Trail	Murphy Road	Town Centre Boulevard	N/A	803	N/A	N/A	- Abandoned rail corridor	Off-Road Trail	The Algonquin Trail in the town of Petawawa forms a north-south spine route that many other proposed cycling routes will connect to. This section of the Algonquin Trail will be twinned, with one trail for motorized vehicles (ATVs and snowmobiles) and one asphalt trail for non-motorized users.
2-1a	Island View Drive	Albert Street	East Street	Municipal - Local	229	40	1,000	- Road width approximately 6.5 metres (source: Google Earth) - Asphalt sidewalk with concrete curb on the north side of the road. - Concrete curb only on the south side of the road	Signed Bicycle Route	Signed bicycle route completes the connection to Petawawa Point, and together with Albert Street, East Street, and Victoria Street, forms a loop through the Petawawa Point neighbourhood.
2-1b	East Street	Victoria Street	Island View Drive	Municipal - Local	841	40	800	- Road width approximately 7.0 metres (source: Google Earth) - No sidewalk or curb (Source: 2012 Google Street View)	Signed Bicycle Route	This signed bicycle route, together with Albert Street, Island View Drive, and Victoria Street, forms a loop through the Petawawa Point neighbourhood.
2-1c	Victoria Street	Albert Street / Laurentian Drive	East Street	Municipal - Local	223	40	1,015	- Road width approximately 7.5 metres (source: Google Earth) - No sidewalk or curb (Source: 2012 streetsview)	Signed Bicycle Route	This signed bicycle route, together with Albert Street, Island View Drive, and East Street, forms a loop through the Petawawa Point neighbourhood.
2-2a	Portage Road	Murphy Road	Scott Avenue	Municipal - Collector	2786	60	902	- No shoulders, or narrow gravel shoulders	Paved Shoulder	Paved shoulders on Portage Road connects Murphy Road, and the Black Bay community further west, to the Town of Petawawa and Garrison Petawawa. Paved shoulders will also improve the route for recreational cyclists.
2-2b	Portage Road	Scott Avenue	Petawawa Boulevard	Municipal - Collector	527	50	1,085	- No shoulders, or narrow gravel shoulders - Asphalt sidewalk on the south side of the road, with a grass boulevard between Scott Avenue and Audrey Street and between the Algonquin Trail corridor and Petawawa Boulevard	Bike Lane	Modify Portage Road between Scott Avenue and Petawawa Boulevard to an urban cross-section with designated bike lanes and no parking permitted. The bike lanes will connect existing and developing communities off of Portage Road to the Algonquin Trail and Petawawa Boulevard.
2-3a	Victoria Street	Wolfe Avenue	Albert Street / Laurentian Drive	County - Collector	1263	50	4,729	- 1.4 metre wide shoulders with mountable curb and channel - Concrete sidewalk on the north side of the road	Bike Lane	Provides a east-west route between Petawawa Boulevard and Laurentian Drive / Petawawa Point. Designate the existing asphalt shoulders as bike lanes by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes. The proposed bike lanes are a strong candidate for the application of flexible delineator posts between the proposed bike lane and the vehicle lanes.
2-4a	Wolfe Avenue	Victoria Street	100m south of Mohns Avenue	Municipal - Collector	211	50	5,000	- Mountable curb and channel with asphalt boulevards approximately 1.5 metres wide - Concrete sidewalks on both sides of the road between Victoria Street and Mohns Avenue - Concrete sidewalk on the east side of the road only south of Mohns Avenue	In-Boulevard Multi-Use Pathway	A multi-use pathway on east side of Wolfe Road connects the Millennium Trail north of Victoria Street to the off-road connection between Wolfe Road and Dundonald Drive. Consider a pedestrian / cyclist crossing of Victoria Street to the Millennium Trail.

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
2-4b	Off-Road Connection	Dundonald Drive	Wolfe Avenue	N/A	1325	N/A	N/A	- Existing informal pathways in forested area between Wolfe Avenue and Dundonald Drive	Off-Road Trail	Improve existing informal pathways between Wolfe Avenue 100m south of Mohns Avenue and Dundonald Drive 150m west of Volunteer Way. Provides a connection to complete a continuous north-south route from the Millennium Trail / Victoria Street to the north to Volunteer Way and Civic Centre Road to the south.
2-4c	Dundonald Drive	150m west of Volunteer Way	Volunteer Way	Municipal - Collector	155	40	5,000	- Concrete curbs between Volunteer Way and the driveway approximately 80 metres west of Volunteer Way - Gravel shoulders and no curb between Wilbert Street and the driveway 80m west of Volunteer Way - Concrete sidewalk with grass boulevard on the north side of Dundonald Drive - Marked crosswalk across Dundonald Drive approximately 20 metres east of Volunteer Way	In-Boulevard Multi-Use Pathway	Multi-use pathway on north side of Dundonald Drive to connect the multi-use pathway on Volunteer Way with proposed north-south off-road connection to Wolfe Avenue (starting 150m west of Volunteer Way).
2-4d	Volunteer Way	Dundonald Drive	Civic Centre Road	Municipal - Collector	526	40	3,000	- 1.5 metre wide asphalt sidewalk with a wide grass boulevard approximately 3.0 metres in width on the east side of the road between the Petawawa Civic Centre (140 metres south of Dutch Drive) and Civic Centre Road - Concrete sidewalk with narrower grass boulevard on the east side of the road between Dundonald Drive and the Petawawa Civic Centre (140 metres south of Dutch Drive) - Concrete sidewalk with minimal to no boulevard on the west side of the road (between Dutch Drive and Civic Centre Road)	In-Boulevard Multi-Use Pathway	Multi-use pathways on east side of Volunteer Way connects south side PMQs and communities to the north to the Civic Centre and Civic Centre Road to the south. The east side multi-use pathway will also connect to the proposed off-road connection between the Civic Centre and Saint Francis of Assisi School. Construct the multi-use pathway by replacing the existing sidewalk from Dundonald Drive to the Civic Centre and widening the existing asphalt pathway from Civic Centre to Civic Centre Road. Consider moving the existing crosswalk on Dundonald Drive 15 metres east of Volunteer Way to just east of Volunteer Way - in-line with the proposed Volunteer Way multi-use pathway.
2-5a	Doran Road	Petawawa Boulevard	Murphy Road	County - Minor Arterial	1082	50	3,833	- Sidewalk and paved asphalt boulevard (1.6 metres) with mountable concrete curb and channel on the west side of the road - Asphalt boulevard with mountable concrete curb and channel, but no sidewalk, on the east side of the road	Separated Bike Lane or Cycle Track	Doran Road is a north-south arterial that connects several residential areas to the south with the Algonquin Trail and Petawawa Boulevard to the north. It also provides connections to Mohns Avenue and Our Lady of Sorrows Elementary School, as well as Herman Street and Herman Street Elementary School. Re-designate the existing asphalt boulevards as cycle tracks by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. The side street crossings should also be improved by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability.
2-5b	Doran Road	Murphy Road	Black Bay Road	County - Minor Arterial	2040	60	3,121	- 0.7 metre wide paved asphalt shoulder - 1.5 metre wide asphalt sidewalk with grass boulevard on the east side of the road between Murphy Road and Derek Drive	Buffered Paved Shoulder	Widening the existing shoulder and providing a painted buffer extends a north-south cycling route alongside the semi-urban communities east of Doran Road, as well as improves the route for recreational cyclists.
2-6a	Herman Street	Woodland Crescent	Doran Road	Municipal - Local	539	50	750	- Concrete sidewalk on the south side of the road	Signed Bicycle Route	Signed bicycle route connects the off-road cycling network north of Woodland Park (to the west) with Doran Street and Herman Street Elementary School (to the east).
2-7a	Murphy Road	Eichstaedt Road	Highway 17	Municipal - Collector	2146	80	2,000	- Gravel shoulders	Paved Shoulder	Connects the Black Bay community to Petawawa east of Highway 17. Also provides a recreational cycling loop with Eichstaedt Road and Black Bay Road.
2-7b	Murphy Road	Highway 17	Woodland Crescent	County - Minor Arterial	1755	80	1,842	- Gravel shoulders	Paved Shoulder	Connects Petawawa to Highway 17 and to the Black Bay community west of Highway 17. Consider an eastbound left-turn bike lane or bike crossing at Woodland Crescent to transition eastbound cyclists to the north side multi-use trail on Murphy Road east of Woodland Crescent

Road jurisdiction: black text = Town of Petawawa, maroon text = County of Renfrew, blue text = federal (Garrison Petawawa), purple text = neighbouring township

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
2-7c	Murphy Road	Woodland Crescent	Doran Road	County - Minor Arterial	456	60	4,851	- Gravel shoulders - Asphalt sidewalk and grass boulevard on the north side of the road (between Hemlock Street and Doran Street)	In-Boulevard Multi-Use Pathway	Multi-use pathway on the north side of Murphy Road from Woodland Crescent to Doran Road to continue the multi-use pathway proposed along the length of Murphy Road and Civic Centre Road (within the urban area).
2-7d	Murphy Road	Doran Road	Petawawa Boulevard	County - Minor Arterial	747	50	6,037	- Gravel shoulder on the south side of the road, however the gravel shoulder is narrow <1.0 metre from Roy Street / Nuthatch Drive to Herman Street / Butler Boulevard - Asphalt sidewalk and grass boulevard on the north side of the road	In-Boulevard Multi-Use Pathway	Widen existing asphalt pathway on the north side of Murphy Road from Petawawa Boulevard to Doran Road to a 3.0 metre wide multi-use pathway. The proposed pathway connects to the Algonquin Trail and to the existing multi-use pathway on Civic Centre Road.
2-7e	Intersection of Petawawa Boulevard and Civic Centre Road / Murphy Road	N/A	N/A	N/A	N/A	N/A	N/A	- Existing intersection includes: - One vehicle through lane in all directions - Dedicated right-turn lanes in the northbound and southbound directions - Dedicated left-turn lanes in the northbound, southbound, and westbound directions - Northbound and southbound bike lanes - Crosswalks across all approaches - Sidewalks on the north side of Civic Centre Road and Murphy Road, and on the east side of Petawawa Boulevard	Intersection Improvements	- Provide a crossside south of the existing crosswalk on the north leg of the intersection - Consider providing a dedicated eastbound left-turn and provide a dedicated eastbound left-turn phase to separate eastbound left-turn traffic from the north crosswalk / crossside - Consider providing a dedicated westbound right-turn lane and provide a dedicated westbound right-turn phase to separate westbound right-turn traffic from the north crosswalk / crossside - May also need to accommodate a crossside on the west side of the intersection for the Algonquin Trail.
2-7f	Civic Centre Road	Petawawa Boulevard	Volunteer Way	Municipal - Collector	100	50	6,245	- One eastbound traffic lane and two westbound traffic lanes (westbound left-turn and westbound through-right) - Concrete curbs, grass boulevards, and concrete sidewalks on both sides of the road - Multi-use trail on the north side of Civic Centre Road east of Volunteer Way	In-Boulevard Multi-Use Pathway	Multi-use pathway on north side from Petawawa Boulevard to Volunteer Way to connect the existing multi-use pathway on Civic Centre Road to Petawawa Boulevard, the Algonquin Trail, and Murphy Road.
2-8a	Limestone Trail	Petawawa Boulevard	Laurentian Drive	Municipal - Local	742	50	12,382	- Road width approximately 7.0 metres (source: Google Earth) - Concrete curb / channel on both sides of the road - Concrete sidewalk and grass boulevard on the north side of the road	Bike Lane	Connect to the Algonquin Trail, Town Centre Boulevard and Petawawa Boulevard in the west with Laurentian Drive in the east. Road widening is required to accommodate bike lanes. Sign and enforce no parking on the new bike lanes.
2-8b	Renfrew Street	Proposed off-road facility	Limestone Trail	Municipal - Local	145	50	1,000	- The proposed off-road facility extends northeastward from the 90 degree bend of Renfrew Street	Signed Bicycle Route	A Signed bike route is recommended to connect Limestone Trail with the proposed off-road facility running east-west on the hydro utility corridor north of Riverstone Trail. Ensure entrance to off-road cycling network at corner of Renfrew Street is well signed
2-9a	Gutzman Road	Petawawa Boulevard	Country Lane / Selley Street	Municipal - Local	562	60	480	- Gravel shoulders	Paved Shoulder	Paving the existing gravel shoulders on Gutzman Road provides an east-west route between Petawawa Boulevard / the Algonquin Trail, Laurentian Drive, and the north-south neighbourhood cycling route at Country Lane / Selley Street.
2-10a	Biesenthal Road	Petawawa Boulevard	Achray Road	Municipal - Collector	3469	60	1,600	- Gravel shoulders	Paved Shoulder	Paving the existing gravel shoulders provides a north-south route between Petawawa Boulevard / the Algonquin Trail and Achray Road, and improves the road as a recreational cycling route.
2-11a	Off-Road Connection	Scott Avenue / Hilda Street	Proposed trails west of Sammy Drive	N/A	235	N/A	N/A	- Existing "Nature's Acre" municipal park connects Scott Avenue and Hilda Street to forested area south of Hilda Street / west of Russell Street	Off-Road Trail	Connect Scott Avenue / Hilda Street to proposed trail network west of Sammy Drive and Oak Avenue through "Nature's Acre" park. This connection provides an alternative off-road north-south route between Portage Road and Doran Road, and creates a recreational off-road cycling opportunity.



Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
3-1a	Petawawa Boulevard	Paquette Boulevard	Victoria Street	County - Major Arterial	906	50	11,732	- Constrained by bridge over Petawawa River - Bridge includes two vehicle lanes, narrow shoulders, and a sidewalk on the east side of the road - Proposed County of Renfrew expansion of Petawawa Boulevard would widen Petawawa Boulevard between Paquette Boulevard and Victoria Street from 2 lanes to 4, as well as add bike lanes and sidewalks on both sides of the road (Source: Building Renfrew Up - Why the expansion of County Road 51 is important for the County of Renfrew and the Town of Petawawa (2017))	Separated Bike Lane or Cycle Track	It is recommended that the future expansion of Petawawa Boulevard accommodate cycle tracks due to the volume of traffic on Petawawa Boulevard. This project is a key connection over the Petawawa River between the Town of Petawawa and Garrison Petawawa. Cyclists that desire complete separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.
3-1b	Petawawa Boulevard	Victoria Street	Doran Road / Mohns Avenue	County - Major Arterial	221	50	13,794	- Single vehicle lanes in either direction, with auxiliary turn lanes - Concrete sidewalk with narrow asphalt boulevard and curb on the east side of the road - Proposed County of Renfrew expansion of Petawawa Boulevard would widen Petawawa Boulevard between Paquette Boulevard and Victoria Street from 2 lanes to 4, as well as add bike lanes and sidewalks on both sides of the road (Source: Building Renfrew Up - Why the expansion of County Road 51 is important for the County of Renfrew and the Town of Petawawa (2017))	Separated Bike Lane or Cycle Track	It is recommended that the future expansion of Petawawa Boulevard accommodate cycle tracks due to the volume of traffic on Petawawa Boulevard. This project is an important north-south route through the Town of Petawawa. Cyclists that desire complete separation from vehicle traffic will be accommodated on the parallel Algonquin Trail facility.
3-3a	Victoria Street	Petawawa Boulevard	Wolfe Avenue	County - Collector	875	50	2,666	- Mountable curb and channel with asphalt boulevards (asphalt boulevard is 1.7 metre wide on south side of road) - Concrete sidewalk on the south side of the road	Separated Bike Lane or Cycle Track	This section of Victoria Street forms an important east-west route between Petawawa Boulevard and Petawawa Point / the south side PMQs. The existing asphalt boulevards should be re-designated as cycle tracks by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Improve asphalt quality of cycle tracks as required, and sign and enforce no parking on new cycle tracks. The side street crossings should also be improved by painting crosswalks and crossrides, and by modifying the existing mountable curb and channel to a flush curb at crossings for improved rideability.
3-4a	Doran Road	Black Bay Road	Achray Road	County - Minor Arterial	3642	80	3,766	- Gravel shoulders	Buffered Paved Shoulder	Paving the existing shoulder and providing a painted buffer provides an improved route for recreational cyclists, connects to Achray Road, and improves the route to existing mountain bike trails on Forest Lea Road.
3-5a	Herman Street	Doran Road	Murphy Road	Municipal - Collector	976	40	1,527	- 0.9 metre wide shoulders with mountable concrete curb and channel (John Street to Murphy Road) - Concrete sidewalk with 0.7 metre wide asphalt boulevard on the south side of the road	Bike Lane	Bike lanes serve Herman Street Elementary School and provide a route between Murphy Road, John Street, and Doran Road. The route also connects to Butler Boulevard and Town Centre Boulevard south of Murphy Road. Widen existing shoulders by narrowing existing vehicle lanes to the minimum width (3.0 metres). Designate asphalt shoulders as bike lanes by applying bicycle lane pavement markings and signage - see Ontario Traffic Manual - Book 18, Section 4.3. Sign and enforce no parking on new bike lanes.
3-6a	Eichstaedt Road	Murphy Road	Black Bay Road	Municipal - Local	900	50	1,000	- Road width approximately 6.0 metres (source: Google Earth) - Narrow gravel shoulders	Paved Shoulder	Connects to Murphy Road and Black Bay Road to provide a recreational cycling route and improve connectivity west of Highway 17.
3-6b	Black Bay Road	Eichstaedt Road	Highway 17	Municipal - Local	2532	60	1,000	- Road width approximately 7.0 metres (source: Google Earth) - Gravel shoulders	Paved Shoulder	Paving the existing shoulder provides a recreational cycling route and improves connectivity west of Highway 17.

Project ID	Route Description	From	To	Road Classification	Segment Length (m)	Posted Speed Limit	AADT	Context Considerations	Proposed Facility Type	Project Description
3-6c	Black Bay Road	Highway 17	Doran Road	Municipal - Collector	2007	60	2,000	- Road width approximately 7.0 metres (source: Google Earth) - Gravel shoulders	Paved Shoulder	Paving the existing gravel shoulders provides an east-west route between Highway 17 and Doran Road, and improves the road as a recreational cycling route.
3-7a	Airport Road	Doran Road	Petawawa Boulevard	Municipal - Collector	2638	60	967	- Gravel shoulders - Road asphalt in poor condition	Paved Shoulder	Paving the existing gravel shoulders provides an east-west route between Doran Road and Petawawa Boulevard / the Algonquin Trail, and improves the road as a recreational cycling route.
3-7b	Radtke Road	Petawawa Boulevard	Behnke Crescent	Municipal - Local	1740	50	500	- Gravel shoulder on the south side of the road and an asphalt sidewalk with grass boulevard on the north side of the road (between Petawawa Boulevard and Runge Road) - Gravel shoulders east of Runge Road, except for between 75 metres east of Runge Road and 350 metres east of Runge Road, where there is a steep slope of 9% grade bounded by traffic barrier on both sides on the road	Paved Shoulder	Paving the existing gravel shoulders on Radke Road provides a connection between Petawawa Boulevard / the Algonquin Trail and the residential community at the east end of Radke Road. The cost of widening Radtke Road between 75 metres east of Runge Road and 350 metres east of Runge Road, where there is a steep slope of 9% grade bounded by traffic barrier on both sides on the road, may be above standard unit price - consider providing a wide paved shoulder for uphill (westbound) cyclists only.
3-8a	Golf Course Road	Petawawa Boulevard	Town of Petawawa boundary	Municipal - Collector	1199	60	1,004	- Town of Petawawa boundary is approximately midpoint between Fairway Drive and Lapointe Street - Gravel shoulders - 8.2% grade measured between Petawawa Boulevard and Lakeview Avenue	Paved Shoulder	Connects several residential streets, such as Pinegrove Crescent, Lakeview Avenue, and Easy Street, to Petawawa Boulevard
3-9a	Intersection of Petawawa Boulevard and Limestone Trail / Town Centre Boulevard	N/A	N/A	N/A	N/A	N/A	N/A	- Existing intersection includes: - One vehicle through lane in all directions - Dedicated right-turn lanes in the northbound and southbound directions - Dedicated left-turn lanes in all directions - Northbound and southbound bike lanes - Crosswalks across all approaches - Sidewalks on both sides of Town Centre Boulevard, the north side of Limestone Trail, and the east side of Petawawa Boulevard (north of Limestone Trail / Town Centre Boulevard)	Intersection Improvements	- Recommend widening Town Centre Boulevard and Limestone Trail on their respective approaches to Petawawa Boulevard to permit the construction of eastbound and westbound bike lanes through the intersection. - May also need to accommodate a crossride on the west side of the intersection for the Algonquin Trail.